DIRECT TESTIMONY AND EXHIBITS OF

O'NEIL O. MORGAN

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF DOCKET NOS. 2021-143-E and 2021-144-E

1 Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is O'Neil O. Morgan. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as a Senior Engineer in the Utility Rates and Services Division of the Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

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I received a Bachelor of Engineering degree in Mechanical Engineering from the University of Technology, Jamaica in 2006 and a Master of Science degree in Engineering Management from Florida International University in 2008. I have worked in the energy industry for over sixteen (16) years and prior to my employment at ORS, served in a variety of positions developing and implementing energy efficiency ("EE") and demand side management ("DSM" and together with EE, "EE/DSM") programs for multiple investor-owned utilities in the United States. My responsibilities included providing guidance and recommendations on various technical issues relating to EE program implementation, baseline determination, energy impact estimation algorithms, rebate processes, and responding to measurement and verification evaluators and Public Service Commission staff. I joined ORS in November 2019 and assumed my current position.

1 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE 2 COMMISSION OF SOUTH CAROLINA ("COMMISSION")?

- 3 A. Yes. I have testified on multiple occasions before the Commission in matters related
 4 to annual fuel clause and avoided costs proceedings.
- 5 Q. WHAT IS THE MISSION OF ORS?
- 6 A. ORS represents the public interest as defined by the South Carolina General
 7 Assembly in S.C. Code Ann. § 58-4-10 as:
- [T]he concerns of the using and consuming public with respect to public utility services, regardless of the class of customer, and preservation of continued investment in and maintenance of utility facilities so as to provide reliable and high-quality utility services.
- 12 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS
 13 PROCEEDING, AND HOW DOES YOUR DIRECT TESTIMONY REPRESENT
- 14 THE PUBLIC INTEREST?
- The purpose of my direct testimony is to set forth ORS's recommendations 15 A. 16 resulting from the examination of Duke Energy Carolinas, LLC's ("DEC") and Duke Energy Progress, LLC's ("DEP" and together with DEC, "Duke" or the "Companies") 17 Applications for approval of Smart \$aver Solar as EE Programs ("Programs") and 18 19 compliance with certain sections of the South Carolina Energy Freedom Act ("Act 62"). By reviewing the Companies' Applications to ensure compliance with applicable statutes 20 21 and Commission Orders, reviewing the proposed Programs for additional recovery of net 22 energy metering ("NEM") lost revenues and shareholder incentives, and considering whether the Programs are cost-effective such that residential customers see a greater 23 24 benefit than additional costs, my direct testimony promotes the public interest.

DID YOU INCLUDE ANY EXHIBITS WITH YOUR DIRECT TESTIMONY? 1 Q. 2 Yes. I have included four (4) exhibits with my direct testimony labeled as Exhibits A. 3 OOM-1 through OOM-4. The exhibits include various discovery data responses provided 4 by the Companies which support my direct testimony. 5 WAS THE REVIEW PERFORMED BY YOU OR UNDER YOUR SUPERVISION? Q. Yes. The review to which I testify was performed by me or under my supervision. 6 A. 7 Q. DID ORS RETAIN ANY EXPERT WITNESSES FOR THIS PROCEEDING? 8 Yes. ORS retained an expert witness for this proceeding: Mr. Brian Horii, a Senior A. 9 Partner with Energy and Environmental Economics, Inc. ("E3"). 10 Q. WHAT DOES MR. HORII ADDRESS IN HIS DIRECT TESTIMONY? 11 Mr. Horii discusses E3's analysis, review and recommendations regarding the A. 12 Applications filed by Duke in these dockets to establish EE incentive programs for 13 residential solar photovoltaic ("PV") customer-generators. WHAT ARE ORS'S CONCERNS WITH THE PROPOSED SOLAR PV 14 Q. **CUSTOMER-GENERATOR PROGRAMS AS EE/DSM PROGRAMS?** 15 16 ORS has several concerns with the proposed Programs as EE/DSM Programs: A. 17 It is not proper to classify customer-generator Solar PV systems as EE; 1. 18 2. Duke's proposed Programs create significant additional customer costs; 19 3. The additional costs imposed on non-solar residential customers are 20 unwarranted; and 21 4. Duke's cost-effectiveness test results contain serious flaws. 22 WHAT IS ORS'S OVERALL RECOMMENDATION REGARDING THE Q. 23 PROGRAMS PROPOSED BY THE COMPANIES IN THESE DOCKETS?

1	A.	Due to the concerns identified above, and as set forth in my direct testimony and in
2		the direct testimony of ORS witness Horii, ORS recommends that the Companies' request
3		for approval of the Programs be denied.
4		CUSTOMER-GENERATOR SOLAR PV SYSTEMS CLASSIFIED AS EE
5	Q.	WHAT IS THE DEFINITION OF EE?
6	A.	The United States Energy Information Administration ("EIA") definition and
7		example of EE states:
8 9 10 11 12		Energy efficiency is using technology that requires less energy to perform the same function . Using a light-emitting diode (LED) light bulb or a compact fluorescent light (CFL) bulb that requires less energy than an incandescent light bulb to produce the same amount of light is an example of energy efficiency. (Emphasis added)
13 14		The North Carolina Renewable Energy and Energy Efficiency Portfolio Standard
15		("REPS"), section § 62-133.8 (a)(4), provides another representative definition of EE:
16 17 18 19 20 21		Energy efficiency measure means an equipment, physical, or program change implemented after January 1, 2007, that results in less energy used to perform the same function. "Energy efficiency measure" includes, but is not limited to, energy produced from a combined heat and power system that uses nonrenewable energy resources. Energy efficiency measure does not include demand-side management. (Emphasis added)
22		ORS includes North Carolina's definition because of Duke's multi-jurisdictional
23		operation of its electrical system across both South Carolina and North Carolina. The
24		Companies' EE/DSM programs are intended to mirror each other across both States. In
25		order to be viable and implemented system wide, the proposed Programs will require not

¹ EIA "Use of energy explained, Energy efficiency and conservation", https://www.eia.gov/energyexplained/use-of- energy/efficiency-and-conservation.php

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Docket No. 2021-143-E Docket No. 2021-144-E Duke Energy Progress, LLC Duke Energy Carolina, LLC Page 5 of 13

only the approval of this Commission but also approval by the North Carolina Utility Commission.

Simply put, the installation of a solar PV customer-generator system does not fit the EIA and other definitions of EE. Customer-sited solar PV is a **source** of energy and in no way reduces the consumption of any end-use household equipment for the customer-generator. Therefore, the Companies should not be allowed to claim for EE purposes the energy savings resulting from solar PV customer-generators simply because the customer-generators' financial investment reduces the reliance on the Companies to provide energy. ORS witness Horii provides additional support to reject the classification of Solar PV as EE.

ARE REGULATED ELECTRIC UTILITIES IN OTHER STATE JURISDICTIONS OFFERING SIMILAR SOLAR PV AS EE PROGRAMS TO THOSE PROPOSED BY THE COMPANIES?

No, the Companies' proposals appear to be a first of their kind. ORS identified no similar programs in its research, and by Duke's own admission, it also is unaware of any similar programs in other state jurisdictions.² If approved by the Commission, DEC and DEP would be the first and only regulated electric utilities in the nation permitted to include solar PV customer-generator systems as EE. The Programs are truly novel and involve significant potential costs to customers that Duke has not justified.

² Responses to ORS Data Requests 1-14 (Exhibit OOM-1).

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COST IMPACT TO CUSTOMERS OF THE COMPANIES' PROPOSED PROGRAMS

- 2 Q. WHAT COSTS WILL DUKE BE ELIGIBLE TO RECOVER FROM CUSTOMERS
- 3 IF THE PROPOSED PROGRAMS ARE APPROVED BY THE COMMISSION?
- 4 A. If the proposed Programs are approved, the Companies will be eligible to recover
- 5 all expenses incurred as a result of the implementation of the Programs under the existing
- 6 EE/DSM Recovery Mechanisms most recently approved in Commission Order Nos. 2021-
- 7 32 and 2021-33. These costs include:
- 8 1. Program costs and additional solar PV customer-generator incentives
- 9 associated with the implementation of the Programs;
- 10 2. Net Lost Revenues ("NLR")³ associated with the implementation of EE
- measures for the first thirty-six (36) months; and
- 12 3. Portfolio Performance Incentive ("PPI")⁴ of 10.6%.
- 13 It is clear that the cost impact from the proposed Solar PV as EE Programs will increase
- the current EE/DSM Riders for the Companies.
- 15 Q. HAS DUKE ESTIMATED THE ADDITIONAL COSTS THAT WILL BE
- 16 INCURRED IF THE PROPOSED PROGRAMS ARE APPROVED?
- 17 A. Yes. DEC estimates an additional \$6,733,203 and DEP estimates an additional
- \$890,836 in costs will be incurred over the next five (5) years if the proposed Programs are
- implemented.⁵ These estimated costs will be recovered from all residential customers and

³ NLR ensure "that the net income of an electrical or gas utility regulated by the Commission after implementation of specific cost-effective energy conservation measures is at least as high as the net income would have been if energy conservation measures had not been implemented." (S.C. Code Ann. § 58-37-20)

⁴ PPI is a 10.6% shareholder incentive on the net dollar savings of the Companies' EE/DSM portfolio, as calculated using the Utility Cost Test.

⁵ Responses to ORS Data Requests 1-22 (Exhibit OOM-2).

will be in addition to the current costs to be recovered for EE/DSM which total \$80,028,532 for DEC⁶ and \$37,477,937 for DEP⁷ customers. For both Companies, residential customers will pay approximately 47% (DEC) and 52% (DEP) of these large existing EE/DSM Program balances. Table 1 and Table 2 below provide a breakdown of the costs to be recovered from DEC and DEP customers.

Table 1: South Carolina Costs to be Recovered from DEC Customers

	Program Costs	NLR	PPI	South Carolina Total Costs	South Carolina Residential
Docket No. 2021-76-E	\$46,847,085	\$25,289,890	\$7,891,556	\$80,028,532	\$37,734,625
Current Docket No. 2021-144-E	\$3,193,432	\$3,015,969	\$523,802	\$6,733,203	\$6,733,203

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Beginning January 1, 2022, DEC residential customers will pay .5769 cents per kilowatt-hour ("¢/kWh"). For an average DEC residential customer using 1,000 kWh per month, the customer will pay approximately \$5.77 per month for DEC's existing EE/DSM programs, participating or not. The proposed Programs would increase this amount with approximately an additional \$3,539,771, or 53% of the new proposed total costs, going to DEC's shareholders in the form of NLR and PPI.

⁶ Docket No. 2021-76-E, effective January 1, 2022.

⁷ Docket No. 2021-243-E, currently pending before the Commission. ORS report and intervenor comments are due to be filed on October 15, 2021, with cost recovery effective January 1, 2022, if approved.

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Table 2: South Carolina Costs to be Recovered from DEP Customers

	Program Costs	NLR	PPI	South Carolina Total Costs	South Carolina Residential
Docket No. 2021-243-E	\$28,530,347	\$6,641,672	\$2,305,918	\$37,477,937	\$19,613,910
Current Docket No. 2021-143-E	\$318,069	\$539,708	\$33,059	\$890,836	\$890,836

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Currently, DEP residential customers pay .647 ¢/kWh. If the EE/DSM cost recovery application currently before this Commission is approved the rate would increase to .829 ¢/kWh beginning January 1, 2022. For an average DEP residential customer using 1,000 kWh per month, the customer would pay approximately \$8.29 per month for DEP's existing EE/DSM programs, participating or not. The proposed Programs would increase this amount with approximately an additional \$572,767, or 64% of the total costs, going to DEP's shareholders in the form of NLR and PPI.

Q. WHAT OTHER CONCERN DOES ORS HAVE WITH THE POTENTIAL COSTS TO BE RECOVERED BY DUKE IF THE PROPOSED PROGRAMS ARE APPROVED BY THE COMMISSION?

As stated above, DEC estimates an additional \$6,733,203 and DEP estimates an additional \$890,836 in additional costs will be incurred over the next five (5) years if the proposed Programs are implemented. These cost figures include NLR of approximately \$3,015,969 (44% of total costs) for DEC and \$539,708 (61% of total costs) for DEP. If the Commission considers the proposed Programs, ORS recommends that NLR associated

NON-SOLAR RESIDENTIAL CUSTOMERS

Q. DOES THE INFORMATION PROVIDED BY THE COMPANY DEMONSTRATE THAT CUSTOMER-GENERATORS REQUIRE ADDITIONAL FINANCIAL INCENTIVES TO ADOPT SOLAR PV?

A. No. ORS reviewed the Companies' Applications and data request responses and found no support that additional financial incentives are needed to entice customers to install solar PV. Based on the Companies' interconnection trends, the recent Commission approval and availability of the Solar Choice Metering tariffs, and the new customergenerator interconnection applications received since June 1, 2021, ORS concludes that further financial incentives will not increase, in any material way, the adoption of solar PV by residential customers.

24 Q. WHAT IS THE COMPANIES' PROJECTED CUSTOMER PARTICIPATION IN

THE PROPOSED PROGRAMS?

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⁸ Effective for residential applicants applying on or after June 1, 2021.

Docket No. 2021-143-E Docket No. 2021-144-E Duke Energy Progress, LLC Duke Energy Carolina, LLC Page 10 of 13

Based on the Companies' data responses, the Companies project that 3,112 1 A. 2 customers will participate in the DEC proposed Program and 595 customers will participate in the DEP proposed Program over a five (5) year period beginning January 1, 2022. On 3 an annual basis, that equates to an average increase of 622 and 119 customers participating 4 5 in the Companies' proposed Programs each year, respectively. HOW MANY SOLAR PV CUSTOMER-GENERATORS HAVE ALREADY 6 Q. 7 APPLIED FOR NEM UNDER THE NEW SOLAR CHOICE METERING TARIFFS 8 **SINCE JUNE 1, 2021?** 9 As of August 31, 2021, DEC received 454 applications and DEP received 86 A. applications for the new Solar Choice Metering tariffs since June 1, 2021. The current 10 number of applicants for each Company indicates that the incentives contained in the 11 current Solar Choice Metering tariffs are sufficient and adequate to encourage continued 12 13 adoption of residential solar PV. The Companies' response also supports the ORS 14 conclusion that the additional financial incentives proposed by the Programs will cause an 15 increase in free riders, which will increase costs for all of Duke's residential customers. 16 The subject of free riders is addressed in more detail in the direct testimony of ORS witness Horii. 17 18 Q. WHAT TYPES OF FINANCIAL INCENTIVES ARE CURRENTLY AVAILABLE 19 TO SOUTH CAROLINA RESIDENTS INTERESTED IN BECOMING SOLAR PV

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CUSTOMER- GENERATORS?

⁹ Responses to ORS Data Requests 1-3 (Exhibit OOM-3).

¹⁰ Response to ORS Data Request 4-5 (Exhibit OOM-4).

The Companies' residential customers interested in generating their own electricity 1 A. 2 from solar PV systems have many opportunities for financial incentives to encourage solar 3 PV system installation. Below is a list of some of the financial incentives currently available to South Carolina residents: 4 5 1. State Income Tax Credit: Eligible South Carolina residents can receive 25% of the costs of installing a solar PV system, up to \$3,500 per tax year. The 6 7 resident can carry any excess above \$3,500 for up to ten (10) years. 8 2. Federal Residential Solar Energy Credit: The Federal government provides 9 a tax credit of 26% (it is expected that this will be reduced to 22% in 2023) 10 of the cost paid by a resident to install a solar PV system. This tax credit can offset taxes owed or be taken by the resident as a refund. 11 12 3. Property Tax Exemption for Renewable Energy (H.3354): Provides a 13 property tax exemption for solar PV systems (<20kW) placed on the 14 rooftops of residential homes. 15 4. Solar Choice Metering Tariffs: The next generation of NEM offers 16 residential customers, but is not limited to, time-variant pricing structures to include critical peak pricing, monthly netting with net exports credited 17 18 at avoided cost, and the use of self-generated energy behind the meter 19 without penalty. 20 Other incentives such as the Clean Electricity Payment Program are also currently 21 under consideration in Congress and may become available in the near future. 22 Q. HAVE THERE BEEN ANY CHANGES IN THE MARKETPLACE THAT ALSO 23 WOULD ENCOURAGE CUSTOMERS TO ADOPT SOLAR PV?

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1	A.	Yes. The cost of solar PV equipment has fallen substantially over the last decade.										
2		The National Renewable Energy Laboratory in its Q1 2020 report, "U.S. Solar Photovoltaic										
3		System and Energy Storage Cost Benchmark,"11 showed a 64% reduction in the residential										
4		solar PV system cost benchmark from 2010-2020. As solar PV equipment prices continue										
5		to decline, more and more residential customers will be financially able to afford the										
6		opportunity to install solar PV systems on their homes.										
7	Q.	WILL NON-SOLAR RESIDENTIAL CUSTOMERS BE EXPECTED TO PAY FOR										
8		THE COSTS OF ADDITIONAL INCENTIVES FOR SOLAR PV										
9		CUSTOMER-GENERATORS IF THE PROPOSED PROGRAMS ARE										
10		APPROVED?										
11	A.	Yes. If the Commission approves the Companies' proposed Programs, the inclusion										
12		of the proposed Programs as EE will introduce and shift unwarranted costs to the										
13		Companies' non-solar residential customers. And, the Programs will provide the										
14		Companies' shareholders additional NLR and PPI through the existing EE/DSM Recovery										
15		Mechanisms, which will be paid for by all of Duke's South Carolina residential customers.										
16		The Companies have provided no evidence that justifies the implementation of the										
17		proposed Programs and, therefore, these cost shifts would be unwarranted.										
18		DUKE'S COST-EFFECTIVENESS TEST RESULTS										
19	Q.	DOES ORS AGREE WITH THE COST-EFFECTIVENESS TEST RESULTS OF										
20		THE PROPOSED PROGRAMS PROVIDED BY DUKE?										

 $^{11}\ https://www.nrel.gov/docs/fy21osti/77324.pdf$

Duke Energy Progress, LLC

Docket No. 2021-143-E

Direct Testimony of

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sources, becomes available.

Yes.

testimony should new information not previously provided by the Company, or other

DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

Duke Energy Carolinas, LLC's Response to SC Office of Regulatory Staff Data Request No. 1-14

Docket No. 2021-144-E

Date of Request: May 14, 2021
Date of Response: June 3, 2021

CONFIDENTIAL

X NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to SC Office of Regulatory Staff, was provided to me by the following individual(s): Lynda Shafer, Sr Strategy & Collaboration Manager, and was provided to the SC Office of Regulatory Staff under my supervision.

Samuel J. Wellborn Counsel Duke Energy Carolinas, LLC

SC Office of Regulatory Staff
First Request for Production of Books
Records and Other Information
DEC Solar as EE-Docket No. 2021-144-E
Item No. 1-14
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC

Request:

1-14 Identify and list other electric utilities in other state jurisdictions that offers a similar Proposed Program.

Response:

The Company is unaware of a similar program in other state jurisdictions.

Duke Energy Progress, LLC's Response to SC Office of Regulatory Staff Data Request No. 1-14

Docket No. 2021-143-E

Date of Request: May 14, 2021
Date of Response: June 3, 2021

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SC Office of Regulatory Staff First Request for Production of Books Records and Other Information DEP Solar as EE-Docket No. 2021-143-E Item No. 1-14 Page 1 of 1

DUKE ENERGY PROGRESS, LLC

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1-14 Identify and list other electric utilities in other state jurisdictions that offers a similar Proposed Program.

Response:

The Company is unaware of a similar program in other state jurisdictions.

Duke Energy Carolinas, LLC's Response to SC Office of Regulatory Staff Data Request No. 1-22

Docket No. 2021-144-E

Date of Req Date of Res	-	May 14, 2021 June 3, 2021
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First Request for Production of Books
Records and Other Information
DEC Solar as EE-Docket No. 2021-144-E
Item No. 1-22
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC

Request:

1-22 Will the Company seek to recover portfolio performance incentives, program return incentives, and net lost revenues relating to the Proposed Program? If so, what is the overall impact to the DSM/EE rider for customers?

Response:

The Company will seek to recover the applicable portfolio performance incentives, or program return incentives, as well as net lost revenues relating to the Proposed Program in accordance with the Revised Mechanism which is effective January 1, 2022. The projected impact to the rider for each vintage year is in the attached spreadsheet.



Duke Energy Progress, LLC's Response to SC Office of Regulatory Staff Data Request No. 1-22

Docket No. 2021-143-E

Date of Request: May 14, 2021
Date of Response: June 3, 2021

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X NOT CONFIDENTIAL

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DEP Solar as EE-Docket No. 2021-143-E
Item No. 1-22
Page 1 of 1

DUKE ENERGY PROGRESS, LLC

Request:

1-22 Will the Company seek to recover portfolio performance incentives, program return incentives, and net lost revenues relating to the Proposed Program? If so, what is the overall impact to the DSM/EE rider for customers?

Response:

The Company will seek to recover portfolio performance incentives, program return incentives, and net lost revenues relating to the Proposed Program in accordance with the Revised Mechanism which is effective January 1, 2022. The projected impact to the rider for each vintage year is in the attached spreadsheet.



Total NPV Avoided Cost			\$4,716,659.33	\$5,319,106.57	\$6,003,751,66	\$6 771 015 77	\$7.637.761.11	\$682 751 06	\$774 295 91	CO 367 0885	4660,430.02	5998,936.32	\$1,135,657.99																	
NPV Avoided T&D	12	DH107	\$1,434,306.43	\$1,584,414.91	\$1.750,484.96	\$1 934 126 27	\$2.137.315.71	\$98 052 42	\$108 313 72	\$1.00,015	4113,000.34	\$132,220.59	\$146,111.59																	
NPV Avoided Capacity	12	DG107	\$142,597.55	\$156,134.70	\$170,974.32	\$187 244 65	\$205,086,99	\$2 114 14	\$2 314 85	¢2,5±4.63	42,734.00	\$2,776.14 \$2,010.10	\$3,040.72																	
NPV Avoided Energy	12	DF107	\$3,139,755.35	\$3,578,556.97	\$4.082.292.38	\$4 649 644 86	\$5,295,358.41	\$587 584 50	\$663,667.34	\$759,007.34 \$759,007.80	07.00,234.00	\$863,939.59	\$986,505.68																	
-uel LR - VY- Net Fuel LR - 3 VY-4	12	CB9	\$220,640.62	\$ \$241,895.91				\$39.491.74					\$57,067.83																	
Net Fuel LR - VY- 3	12	CB8	\$218,406.61	\$239,501.48	\$262.573.72	\$287.804.71	\$315.392.18	\$39 075 39	\$42,867,53	\$42,007.30 \$47.016.45	74.,OHO.,40	\$51,554.78	\$56,518.34		Total Revenue	Requirement	withIR	\$ 836.171	•			\$ 1,585,585	\$ 1,733,733		\$ 97,207	\$ 144,588				
Net Fuel LR - VY-2	12	CB7	\$216,138.72	\$237,070.45				¢38 652 80		\$46 F20 81	440,030.01		\$55,960.37		_		Yrsir			1	\$262,573.72	\$285,011.83	\$309,359.58				\$47,016.45			\$153,444.60
Net Fuel LR -	12	CB6	2 \$213,836.95	3 \$234,602.83				0 638 223 99					555,393.93				Yr 4 IR				0 \$259,967.96	\$282,176.28		6 \$781,645.72	6	6 \$42,867.58	1 \$46,530.81			6 \$139,904.21
Net kWh 3 @Meter - VY-4	12	BG9	1 5,210,512	8 5,627,353				996 520	-				7 1,355,755				Vr.3.I.R				\$257,322.70			5 \$712,799.76	0 \$39,075.39	0 \$42,414.56	\$46,037.91			1 \$127,527.86
Net kWh @Meter - VY-3	12	BG8	5,236,961	3 5,655,918				1 001 579					1,362,637				Yr 2 I R			5234,002.0				\$450,741.55	\$38,652.80	\$41,954.80				\$80,607.61
Net kWh @Meter - VY-2	12	BG7	5,263,410	5,684,483				1 006 637	1 087 168	7 7 7 7 7 7			1,369,519				Yr 1 IR	\$213.836.95						\$213,836.95	\$38,223.99					\$38,223.99
Net kWh @Meter - VY-1	12	BG6	5,289,860	5,713,048	6.170.092	6 663 700	7.196.796	1 011 696	1 092 631	1 180 042	1,160,042	1,2/4,445	1,376,401	Total Program	Revenue	Requirement	Unallocated	\$2.329.330.71	27 637 63 63	\$2,332,703.10 \$2,535,635,65	\$2,760,332.36	\$3,009,058.93	\$3,281,722.23		\$418,730.99	\$454,207.45	\$494,509.38	\$538,445.58	\$586,823.25	
Total Program Costs	12	OI6	\$2,046,269.38	\$2,202,391.35	\$2.375.765.87	\$2 563 010 36	\$2.765.234.40	\$387.476.59	\$416.255.13	77 OZZ 8775	41.001,0444	\$483,846.00	\$521,748.89			SC Revenue Requirement Requirement	(Allocated)	\$622.334.51	0.000,000	50,000,000,T9	\$737,486.55	\$803,939.60	\$876,787.90		\$58,983.14	\$63,980.41	\$69,657.41	\$75,846.34	\$82,660.90	
Other Utility Costs Tol	12	СН6	\$37,733.13	\$33,533.13	\$33,533,13	\$33 533 13	\$33,533.13	\$10.780.90	\$9.587,525	\$0.500.00	49,780.30	\$9,580.90	\$9,580.90			SC Re	SC Allocation (Allo	١,,,	70272	20.7170 00 = 1=0,	26.717%	26.717%	26.717%		14.086%	14.086%	14.086%	14.086%	14.086%	
O Incentive Costs	12	950	\$1,901,802.24	\$2,053,946.42	\$2.218,262.13	\$2 395 723 10	\$2.587.380.95	¢356 419 58	\$384 933 15	\$415,000,±00	4410,727.90	\$448,986.03	\$484,904.91			Shared Savings		061.33	400,000	10.1/c,Ucc¢	\$384,566.49	\$446,048.57	\$516,487.83		\$31,304.39	\$37,952.32	\$45,758.64	\$54,599.57	\$65,074.36	
Implementation Costs In	12	CF6	\$9,292.61	\$10,036.02	\$10,838,90	\$11,706,01	\$12,642,49	\$1 777 73	\$1,77,75	27.027.06	05.270,25	\$2,238.80	\$2,417.90			Ş	Shared Savings % In	\c	70707	10.0%	10.6%	10.6%	10.6%		10.6%	10.6%	10.6%	10.6%	10.6%	
lm Admin Costs	12	CE6	\$97,441.40	\$104,875.78	\$113,131.71	\$122,048,11	\$131.677.83	¢18 448 89	\$19.821.67	\$21,260.09	\$21,303.08	\$23,040.29	\$24,845.19				Net Benefit Shar	95	77 77 77 77 77	43,110,/13.22 40,000,000	\$3,627,985.79	\$4,208,005.42	\$4,872,526.70		\$295,324.47	\$358,040.78	\$431,685.28	\$515,090.32	\$613,909.10	
Free-Rider % Ac	-	D35	10.0%	10.0%				70 01	10.0%	%0.01	10.0%	10.0%	10.0%			Total NPV	ţ	1				\$6,771,015.77 \$4	\$7,637,761.11 \$		\$682,751.06	\$774,295.91				
Incremental Participation F	_	D35	530.40	572.83	618.66	668 15	721.60	101 44	109.56	110.20	110.32	127.79	138.01		Total	Program		9.38				\$2,563,010.36 \$	\$2,765,234.40 \$		\$387,426.59	\$416,255.13	\$448,750.74	\$483,846.00		
Measure Name	-	5	SC_ Smart \$aver Solar - VY-1	SC Smart \$aver Solar - VY-2	SC Smart Saver Solar - VY-3	SC Smart Saver Solar - VV-4	SC Smart Saver Solar - VY-5	DS Smart Saver Solar - VV-1	PS Smart Saver Solar - VV-2	DC Cmart Caver Colar 1/2	P. Contract	PS_ Smart \$aver solar - VY-4	PS_ Smart \$aver Solar - VY-5					DEC Smart Saver Solar - VY-1		DEC Siliait şavel Solal - VI-Z	DEC Smart Saver Solar - VY-3	DEC Smart \$aver Solar - VY-4	DEC Smart \$aver Solar - VY-5		DEP Smart \$aver Solar - VY-1	DEP Smart \$aver Solar - VY-2	DEP Smart \$aver Solar - VY-3	DEP Smart Saver Solar - VY-4	DEP Smart Saver Solar - VY-5	

Duke Energy Carolinas, LLC's Response to SC Office of Regulatory Staff Data Request No. 1-3

Docket No. 2021-144-E

Date of Rec	-	May 14, 2021 June 3, 2021
	CONF	IDENTIAL
X	NOT (CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to SC Office of Regulatory Staff, was provided to me by the following individual(s): Bill Eberle, Lead DSM & Retail Programs Analyst, and was provided to the SC Office of Regulatory Staff under my supervision.

Samuel J. Wellborn Counsel Duke Energy Carolinas, LLC

SC Office of Regulatory Staff
First Request for Production of Books
Records and Other Information
DEC Solar as EE-Docket No. 2021-144-E
Item No. 1-3
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC

Request:

1-3 Provide the Company's forecast of the expected number of customer participants and the additional customer solar generation in MW that will be added to the Company's system with the approval of the Proposed Program.

Response:

The Company projects 3112 customer participants and 31 MWs of additional solar capacity associated with Proposed Program.

Duke Energy Progress, LLC's Response to SC Office of Regulatory Staff Data Request No. 1-3

Docket No. 2021-143-E

Date of Request: May 14, 2021
Date of Response: June 3, 2021

CONFIDENTIAL

X NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to SC Office of Regulatory Staff, was provided to me by the following individual(s): Bill Eberle, Lead DSM & Retail Programs Analyst, and was provided to the SC Office of Regulatory Staff under my supervision.

Samuel J. Wellborn Counsel Duke Energy Progress, LLC

SC Office of Regulatory Staff
First Request for Production of Books
Records and Other Information
DEP Solar as EE-Docket No. 2021-143-E
Item No. 1-3
Page 1 of 1

DUKE ENERGY PROGRESS, LLC

Request:

1-3 Provide the Company's forecast of the expected number of customer participants and the additional customer solar generation in MW that will be added to the Company's system with the approval of the Proposed Program.

Response:

The Company projects 595 customer participants resulting in 6 MWs of additional solar capacity associated with Proposed Program.

Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's
Response to
SC Office of Regulatory Staff
Data Request No. 4-5

Docket No. 2021-143-E Docket No. 2021-144-E

Date of Request: September 1, 2021
Date of Response: September 10, 2021

CONFIDENTIAL

X NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to SC Office of Regulatory Staff, was provided to me by the following individual(s): Jason D. Martin, DET Strategy & Policy Director, and was provided to the SC Office of Regulatory Staff under my supervision.

Samuel J. Wellborn Counsel Duke Energy Carolinas, LLC & Duke Energy Progress, LLC

SC Office of Regulatory Staff
Fourth Audit Request for Records
and Information
DEC Solar as EE-Docket 2021-144-E
DEP Solar as EE-Docket 2021-143-E
Item No. 4-5
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC & DUKE ENERGY PROGRESS, LLC

Request:

How many customer-generators have applied for net metering under the new Solar Choice Metering tariffs since June 1, 2021?

Response:

As of August 31, 2021, DEC has received 454 applications and DEP has received 86 applications for the new Solar Choice Metering tariffs, since June 1, 2021.